

MATERIAL NUMBER 1.6580 · CLASS 1.6

823M40

Material no. 1.6580

also listed as 30CrNiMo8

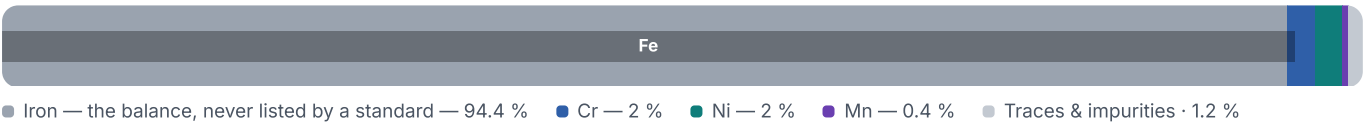
Chemical composition, mechanical and physical property values, and 29 standard designations from 14 regions.

DENSITY 7.76 g/cm³	OTHER DESIGNATIONS 29 in 14 regions	PROPERTY VALUES 12 on file
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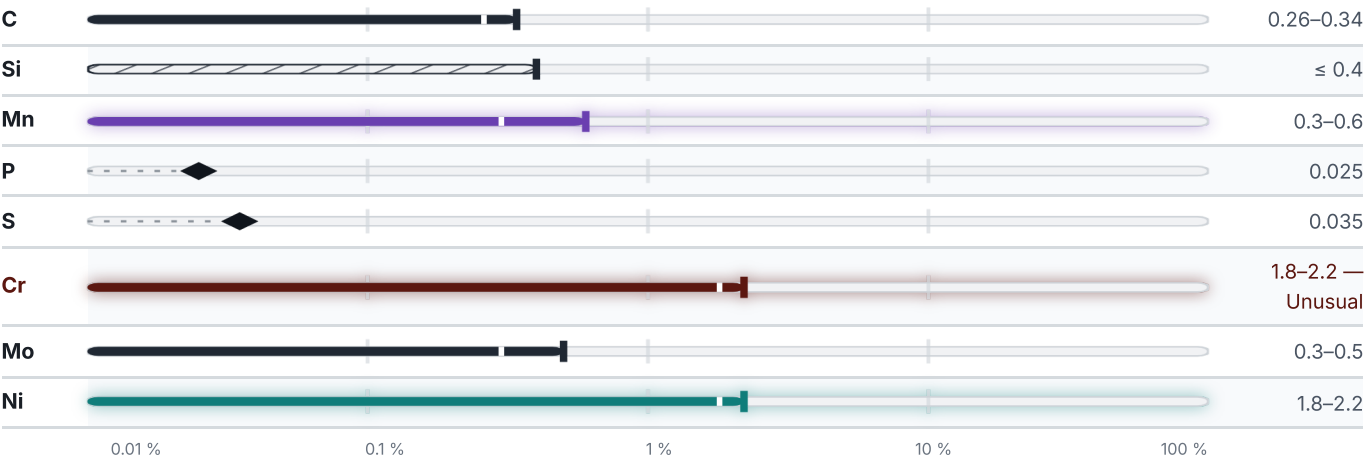
Chemical composition

Mass fraction in %

What this alloy is



Logarithmic scale, 0.01 % to 100 % — every value here compares directly, decade by decade.



The scale is logarithmic, not the element's raw share of the alloy — the only honest way to fit 0.01 % and 100 % in one picture, and it means every value here can be compared with every other.

Predicted transformation temperatures

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

Mechanical properties

12 values across 4 conditions

QUENCHED AND TEMPERED · ROUND PRODUCTS					A % · Lo = 5,65 √So
≤ 16					9
16 – 40					9
40 – 100					10
100 – 160					11
160 – 250					12
SOFT ANNEALED					HB
Soft annealed					248–255
QUENCHING AND DRAWING	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 15	980	785	10	45	780
CONDITION · DIMENSION					HB
30KH2MA (30XH2MA) (annealing) , GOST 4543-71					241

Physical properties

4 values

CONDITION · DIMENSION	E GPa	
20	204	
100	201	
200	194	
300	186	
400	182	
500	171	
600	159	
PROPERTY	VALUE	UNIT
Density	7.76	g/cm ³
Transformation point Ac1	730	°C
Transformation point Ac3	775	°C

Technological properties

PROPERTY	VALUE	UNIT
Flake sensitivity	predisposed	

Heat treatment

1 regimes

STEP	TEMPERATURE	MEDIUM
source joins the operations with + / procedural order		
Quenching	Temperature not stated	—
Tempering	Temperature not stated	—

Designations across standards

29 designations · 3 documented as identical

United States / Aerospace		5	France		2
6359	ams		30CND8		afnor
6409	ams		30NCD8	This grade's own name	afnor
6414	ams		Japan		2
6415	ams				
6454	ams				
Russia / CIS		4	SNCM431		jis
			SNCM439		jis
			Poland		2
30KHN2MA	gost		30H2N2A		pn
30XH2MA	gost		30H2N2M		pn
30XHMA	gost		Europe		1
3KH3M3F	gost		30CrNiMo8	This grade's own name	din-en
United States		3	International		1
G43400	uns		31CrNiMo8		iso
4340	aisi-sae				
A829	astm		China		1
Czechia		3	30Cr2Ni2Mo		gb
16430VN	csn		Serbia		1
16430ŽH	csn				
16435	csn				
United Kingdom		2	Č.5432		srps
823M30	bs		Croatia		1
823M40	This grade's own name	bs	Č.5432		hrn
			Hungary		1
			NCMo 6		msz

Note on use. The data is compiled to the best of our knowledge from publicly available standards and manufacturer documentation. It replaces neither material testing nor an inspection document to EN 10204. Please request a mill certificate to EN 10204 2.1, 3.1 or 3.2 together with your enquiry. The standard in its current valid edition always prevails.

Enquiry about 823M40

Quotation, availability, mill certificate or a technical question — directly on the material page.

[Start an enquiry](#)

DATASHEET ONLINE

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GRADE SEARCH

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ISSUED

Sep 8, 2026